REMARKS

Claims 32 and 36-37 have been amended and new claims 45-52 added. Claims 32, 34, 36, 37, 39, 41, and 42-52 are presently pending. Claim 41 was withdrawn from consideration without prejudice. The amendments and new claims are fully supported by the original claims and specification. For example, the amendments to claims 32 and 36-37 are supported at page 7, lines 7-12, (peptide mimic); at pages 45-48, Examples 2-3 (opsonophagocytosis); and at pages 18-20 (variable regions) of the application as originally filed. New claims 45-47 and 51-52 are also supported, for example, at pages 18-20 and new claims 49-50 at pages 52-56 (Examples 6-7) of the application as filed. No new matter has been added. Entry of the amendments at this time is therefore respectfully requested.

The courtesies extended by Examiner Portner and her supervisor Examiner Smith during the interview on August 25, 2004, to Applicants, Carla Krivak and Jeffrey Stinson, and their representatives, Jeffrey Wolfson and Rodney Fuller are noted and appreciated. The comments and amendments presented herein are substantially the same as those that were presented and discussed at the interview.

Applicants also appreciate the Examiner's entry of Applicant's previous Amendment, and withdrawal of finality of the previous Office Action as noted in paragraph 1 of the pending Office Action. Applicants further appreciate the Examiner's withdrawal of the objections and rejections as noted in paragraphs 2-4 of the Office Action.

Claims 32, 34, 36-37, 39, and 42-44 were rejected under 35 U.S.C. § 112, first paragraph, for the reasons stated in paragraph 5 of the Office Action.

Applicants have amended the claims to clarify that the fragment, region, or derivative of the monoclonal antibody is of the variable region and has specificity to lipoteichoic acid (LTA). Applicant have also amended the claims to clarify that the composition is not just a pharmaceutically acceptable carrier, but also must include the appropriate antibody or fragment, region, or derivative of the antibody's variable region. Applicants have further amended claim certain claims to clarify in a preferred embodiment the peptide sequences are peptide mimics of the LTA epitope binding site. In this embodiment, the variable region that recognizes LTA further recognizes one of the listed peptide mimics. *See* Examples 3-6 of the present application for further explanation of the peptide mimics. As discussed during the interview, these amendments clarify the scope of the claims, which Applicants have fully enabled as evidenced by Applicants' specification and working examples disclosed therein.

The presently amended claims are clear with respect to the recited method steps of administering and with respect to what is being administered. The present specification teaches and provides working examples, including *in vivo* protection experiments for treating or preventing Gram positive bacterial infections as demonstrated, for example, by Examples 12 and 13.

Furthermore, Applicants agree with the Examiner that immunotherapy is well known in the art. One of ordinary skill in the art could therefore use Applicants' teachings and working examples to effectively treat or prevent an infection caused by Gram positive bacteria in a patient commensurate with the scope of the claim without undue experimentation. For these reasons, Applicants respectfully request that this rejection be withdrawn.

Claims 32, 37, 42, and 43 were alleged to conflict with claims 27-30 of Application Nos. 10/323,926 and 10/323,927; and with claims 14-15 and 24-25 of Application No. 10/601,171. Paragraphs 20-22 of the Office Action requires that Applicant either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. As this is a provisional rejection, Applicants will address this upon the allowance of the claims in these other applications as discussed during the interview.

Claims 34 and 36 are objected to under 37 CFR § 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim, as noted in paragraphs 23 and 24 of the Office Action. Applicants traverse.

Claim 36 is amended herein to clarify that the antibody used in independent claim 32 further recognizes a peptide mimic of the LTA epitope binding site. Claim 34, on the other hand, is directed to a specific monoclonal anti-LTA antibody -- Hu96-110. Claims 34 and 36 are therefore in proper dependent form further limiting the subject matter of the previous claim from which each depends. Thus, this objection should be withdrawn.

Claims 32, 34, 36, 37, 39, and 42-44 were rejected under 35 U.S.C. § 112, second paragraph, for the reasons noted in paragraph 27 of the Office Action.

Independent claims 32 and 37 have been amended to clarify that the composition cannot simply comprise a pharmaceutically acceptable carrier, but must also include at least one monoclonal chimeric or humanized antibody having specificity to LTA of Gram positive bacteria, or a fragment, region, or derivative of a variable region of the monoclonal-antibody having specificity to LTA. In light of the clarifying amendments, Applicants request that this rejection also be withdrawn.

Claim 32 was rejected under 35 U.S.C. § 102(b) as being anticipated by Gazmuri *et al.* ((1991), New England Journal of Medicine, in light of the letters to the editor that follow the article, especially on page 281, col. 1, paragraph 1), for the reasons noted in paragraph 28 of the Office Action.

The Gazmuri letters to the editor discuss HA-1A monoclonal antibody for Gram-negative sepsis. In contrast, presently pending claim 32 is directed to a method for treating or preventing an infection caused by Gram positive bacteria comprising at least one monoclonal, fragment, region or derivative of the variable region having specificity to LTA of Gram positive bacteria.

There is no indication from Gazmuri or the letter that Gazmuri's monoclonal antibody would enhance the opsonophagocytosis of Gram positive bacteria, let alone by 75% or more as specifically required by claim 32. This conclusion is supported, for example, at page 279, paragraph one of the letters to the editor, stating that "[p]atients with sepsis or bacteremia caused by microorganisms other than gram-negative bacilli received no measurable benefit." Based on Gazmuri and the letters to the editor, one skilled in the art certainly would not use the anti-Gram-negative monoclonal antibody of Gazmuri to treat or prevent an infection caused by Gram positive bacteria in a patient as required by claim 32.

As Gazmuri does not disclose or teach "each and every element" of claim 32 as required, it consequently cannot anticipate claim 32. Applicants therefore respectfully request that this rejection be withdrawn.

Claim 32 was rejected under 35 U.S.C. § 102(e) as being anticipated by Fattom et al. (U.S. Patent No. 5,770,208), for the reasons noted in paragraph 29 of the Office Action.

Fattom is directed to a novel *Staphylococcus aureus* antigen (Antigen 366) that comprises β-linked hexosamine that do not contain O-acetyl groups and are not Type 5 or Type 8 strains. At column 2, lines, 65-67, of Fattom, it states that antibodies produced to the novel Antigen 336 do not cross-react with polysaccharides isolated from any of S. *aureus* Type 5, Type 8, Type 4, K73 or *S. epidermidis*.

Furthermore, Antigen 366 can be activated with carbodiimide (*See* Example 5), indicating it contains carboxyl groups. LTA, however, cannot be activated with carbodiimide and does not contain carboxyls. Antigen 366 is very different than LTA. Antigen 366 is probably a capsular polysaccharide, but is definitely not an LTA. This is supported by the fact that the protocol used to purify Antigen 366 of Fattom uses 75% ethanol precipitation. Lipotechoic acid is soluble in ethanol, unlike capsular polysaccharides, and therefore, would not have precipitated

out. Finally, the NMR spectra for Type 336 (FIG. 1A of Fattom), Type 8 (FIG. 1B of Fattom), and Type 5 *S. aureus* antigens (FIG. 1C of Fattom) are very different than the NMR spectra of LTA (Infection & Imm. 70:938, 2002).

Presently, claim 32 specifically recites that the monoclonal antibody used to treat or prevent an infection caused by Gram positive bacteria must have specificity to LTA of Gram positive bacteria. Claim 32 further recites that the anti-LTA monoclonal antibody bind to LTA at a level that is twice background or greater, and enhances the opsonophagocytosis of Gram positive bacteria by 75% or more. Monoclonal antibodies to the novel Antigen 366 of Fattom do not have specificity to LTA of Gram positive bacteria and do not enhance opsonophagocytosis of Gram positive bacteria based on this specificity by at least 75% as presently recited by claim 32.

As Fattom does not disclose a monoclonal antibody that meets all of the recitations of claim 32, Fattom cannot properly anticipate claim 32. Therefore, Applicants respectfully request that this rejection be withdrawn.

In view of the foregoing remarks and amendments it is believed that the entire application is now in condition for allowance. Should any issues remain, the Applicants would like to request a further in-person interview to resolve them. If there are any questions, the Examiner is invited to call Jeffrey Wolfson at (202) 371-5770 or Rodney Fuller at (202) 371-5838 to expedite the allowance of all the claims in this application.

Respectfully submitted,

9/28/04
Date

Jeffrey A. Wolfson (Reg. No. 40,234)

WINSTON & STRAWN LLP
CUSTOMER NO. 28765

(202) 371-5770